

What is claimed is:

1. A head-mounted display comprising:
a planar backlight for producing and emitting planar light,
a light-speed controlling element disposed in front of the planar backlight for controlling a speed of incident light so that the incident light propagates parallel or substantially parallel to an optical axis;
an image-forming element disposed in front of the light-speed controlling element for forming an image; and
a Fresnel lens disposed in front of the image-forming element for focusing the image onto an eyeball.
2. The head mounted display of claim 1, wherein the light-speed controlling element is a holographic element that diffracts the incident light so that the incident light propagates parallel to the optical axis or diverges substantially parallel to the optical axis.
3. The head-mounted display of claim 1, wherein the light-speed controlling element is a rubber film that refracts the incident light from the planar backlight at an angle of refraction less than an angle of incidence.
4. The head-mounted display of claim 1, wherein the light-speed controlling element includes a pinhole array having a plurality of pinholes that transmit the incident light from the planar backlight and a microlens array that condenses the incident light transmitted through the plurality of pinholes.

5. The head-mounted display of claim 1, wherein the planar backlight is a light-emitting element that includes at least one of the following: organic and inorganic electroluminescence (EL) material.

6. The head-mounted display of claim 1, wherein the image-forming element is a transmissive liquid crystal display.

7. A head-mounted display comprising:

a backlight that emits a planar light;

a light controlling element that transmits incident light of the planar light so that the incident light propagates parallel or substantially parallel to an optical axis;

an image-forming element that forms an image from the incident light transmitted from the light controlling element; and

a lens that focuses the image onto an eyeball of a user.

8. The head-mounted display of claim 7, wherein the lens is a Fresnel lens.